

An Oil Quality Map of the USA

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The US department of Energy data base, on more than 2000 oils from all over the USA, has been accessed or "mined". Only one useful source parameter was discovered. This parameter, the Sulfur/Nitrogen ratio (Thompson, 1993) was used to prepare a number of maps showing distinct oil quality trends extending across the USA. The S/N ratio (Thompson, 1993) is closely related to depositional environment and can also be used to correlate oils.

In addition, the S/N ratio was evaluated in terms of another oil typing system; the "Geomark" petroleum database. The large Geomark database recognizes at least 8 major oil "source types" and uses a multivariate methodology involving carbon isotopes & biomarkers in type definition. The multivariate method contrasts with the Thompson S/N approach which merely uses elemental analysis and recognizes 7 major oil "source types".

A comparison of the two data bases identified a number of oils in common to both databases. These similar oils correlated in terms of identified source type in only 66 percent of the samples. Hence a lacustrine oil according to Thompson's (1993) criteria was usually recognised as also being of lacustrine origin according to Geomark. Discrepancies between the 2 systems will be discussed.
